

591508035Seqlist.txt  
SEQUENCE LISTING

<110> KURODA, Masaharu

<120> Plant with Reduced Protein Content in Seed, Method of  
Constructing the Same and Method of Using the Same

<130> 59150-8035

<140> US 10/539,992

<151> 2003-12-04

<150> PCT/JP2003/015753

<151> 2003-12-09

<150> JP 2002-369700

<151> 2002-12-20

<160> 119

<170> PatentIn version 3.3

<210> 1

<211> 617

<212> DNA

<213> Oryza sativa

<220>

<223> 13kD prolamin RM9

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20 25 30  
Leu Gln Pro His Leu Met Leu Gln Gln Gln Met Leu Ser Pro Cys Gly  
35 40 45  
Glu Phe Val Arg Gln Gln Cys Ser Thr Val Ala Thr Pro Phe Phe Gln  
50 55 60  
Ser Pro Val Phe Gln Leu Arg Asn Cys Gln Val Met Gln Gln Gln Cys  
65 70 75 80  
Cys Gln Gln Leu Arg Met Ile Ala Gln Gln Ser His Cys Gln Ala Ile

## 591508035Seqlist.txt

85	90	95
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Leu Gln Ser His Leu Leu Leu Gln Gln Val Leu Ser Pro Cys Ser	
35 40 45	
Glu Phe Val Arg Gln Gln His Ser Ile Val Ala Thr Pro Phe Trp Gln	
50 55 60	
Pro Ala Thr Phe Gln Leu Ile Asn Asn Gln Val Met Gln Gln Gln Cys	
65 70 75 80	
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85 90 95	
Ser Ser Val Gln Ala Ile Val Gln Gln Leu Gln Leu Gln Val Gly	
100 105 110	
Val Val Tyr Phe Asp Gln Thr Gln Ala Gln Ala Gln Leu Leu Ala	
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	ccttaggtact	atgttgcacc	cgttacattt	tttttttttttt	tttttttttttt	ttttatgtttttt	660
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<212> PRT  
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<220>  
<223> 13kD prolamin

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 20 25 30  
 Leu Gln Ser Pro Val Leu Leu Gln Gln Gln Val Leu Ser Pro Tyr Asn  
 35 40 45  
 Glu Phe Val Arg Gln Gln Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln  
 50 55 60  
 Ser Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln His Gln Ala  
 65 70 75 80  
 Gly Gly Gln Gln Ser Arg Tyr Gln Asp Ile Asn Ile Val Gln Ala Ile  
 85 90 95  
 Ala Tyr Glu Leu Gln Leu Gln Gln Phe Gly Asp Leu Tyr Phe Asp Arg  
 100 105 110  
 Asn Gln Ala Gln Ala Gln Ala Leu Leu Ala Phe Asn Val Pro Ser Arg  
 115 120 125  
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 Leu Gly Gly Val Leu  
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<213> *Oryza sativa*

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<223> 13kD prolamin

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## 591508035Seqlist.txt

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Leu Gln Ser Pro Val Leu Leu Gln Gln Gln Val Leu Ser Pro Tyr Asn  
35 40 45  
Glu Phe Val Arg Gln Gln Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln  
50 55 60  
Ser Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln Gln Leu Ala  
65 70 75 80  
Leu Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Ile Val Gln Ala  
85 90 95  
Ile Ala Gln Gln Leu Gln Leu Gln Phe Gly Asp Leu Tyr Phe Asp  
100 105 110  
Arg Asn Leu Ala Gln Ala Gln Leu Ala Phe Asn Val Pro Ser Arg Tyr  
115 120 125  
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<210> 9  
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 Leu Gln Gln Gln Met Leu Ser Pro Cys Gly Glu Phe Val Arg Gln Gln  
 35 40 45  
 Cys Ser Thr Val Ala Thr Pro Phe Gln Ser Pro Val Phe Gln Leu  
 50 55 60  
 Arg Asn Cys Gln Val Met Gln Gln Cys Cys Gln Gln Leu Arg Met  
 65 70 75 80  
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 85 90 95  
 Val Gln Gln Leu Gln Gln Phe Ser Gly Val Tyr Phe Asp Gln  
 100 105 110  
 Ala Gln Ala Gln Ala Met Leu Gly Leu Asn Leu Pro Ser Ile  
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 cttgtgtgtg tctgtgtactg aattgtataa gttataatgtt aaaaatgtt aaaaataaagt 540  
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 tattttatca gcaaaaaaaa aaaaaaaaaa 629

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 <213> Oryza sativa

<220>  
 <223> 13kD prolamin

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 Leu Gln Ser His Leu Gln Leu Gln Gln Val Leu Ser Pro Cys Ser

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Cys	Gln	Gln	Leu	Arg	Leu	Val	Ala	Gln	Gln	Ser	His	Tyr	Gln	Ala	Ile
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<220>  
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Leu Gln Ser His Leu Leu Leu Gln Gln Gln Val Leu Ser Pro Cys Ser
35 40 45
Glu Phe Val Arg Gln Gln Tyr Ser Ile Val Ala Thr Pro Phe Trp Gln
50 55 60
Pro Ala Thr Phe Gln Leu Ile Asn Asn Gln Val Met Gln Gln Gln Cys
65 70 75 80
Cys Gln Gln Leu Arg Leu Val Ala Gln Gln Ser His Tyr Gln Ala Ile
85 90 95
Ser Ile Val Gln Ala Ile Val Gln Gln Leu Gln Leu Gln Gln Phe Ser
100 105 110
Gly Val Tyr Phe Asp Gln Thr Gln Ala Gln Ala Gln Thr Leu Leu Thr
115 120 125
Phe Asn Leu Pro Ser Ile Cys Gly Ile Tyr Pro Asn Tyr Tyr Ser Ala

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## 591508035Seqlist.txt

130	135	140
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<220>  
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35 40 45  
Glu Phe Val Arg Gln Gln Tyr Ser Ile Ala Ala Ser Thr Phe Leu Gln  
50 55 60  
Ser Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Leu Gln Gln Leu Arg  
65 70 75 80  
Leu Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Val Val Gln Ala  
85 90 95  
Ile Ala His Gln Leu His Leu Gln Gln Phe Gly Asn Leu Tyr Ile Asp  
100 105 110  
Arg Asn Leu Ala Gln Ala Gln Ala Leu Leu Ala Phe Asn Leu Pro Ser  
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gaaaacaaac	cgtatggca	actatcaggaa
cattaacatt	caatgttcgc	300
cttttagtcg	gttcggccca	360
atatttcgtc	taatccgttc	420
tgttatctac	ccttaggtact	480
gtaatggat	ttaaatcgat	540
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	ttgtttttca	
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<212> PRT

<213> *Oryza sativa*

<220>  
<223> 13kD prolamin

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20 25 30
Leu Gln Ser Pro Val Leu Leu Gln Gln Gln Val Leu Ser Pro Tyr Asn
35 40 45
Glu Phe Val Arg Gln Gln Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln
50 55 60
Ser Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln Gln Leu Ala
65 70 75 80
Leu Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Ile Val Gln Ala
85 90 95
Ile Ala Gln Gln Leu Gln Leu Gln Phe Gly Asp Leu Tyr Phe Asp
100 105 110
Arg Asn Leu Ala Gln Ala Gln Ala Leu Leu Ala Phe Asn Val Pro Ser
115 120 125
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 Gln Ser Pro Val Leu Leu Gln Gln Val Leu Ser Pro Tyr Asn Glu  
 35 40 45  
 Phe Val Ser Ser Ser Met Ala Tyr Gly Asn Pro Phe Leu Gln Ser Ala  
 50 55 60  
 Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln Gln Leu Ala Leu Val  
 65 70 75 80  
 Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Ile Val Gln Ala Ile Ala  
 85 90 95  
 Gln Gln Leu Gln Leu Gln Gln Phe Gly Asp Leu Tyr Phe Asp Arg Asn  
 100 105 110  
 Leu Ala Gln Ala Gln Ala Leu Leu Ala Phe Asn Val Pro Pro Lys Tyr  
 115 120 125  
 Gly Ile Tyr Pro Arg Tyr Tyr Gly Ala Pro Ser Thr Ile Thr Thr Leu  
 130 135 140  
 Gly Gly Val Leu  
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<210> 21  
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<220>  
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 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (109)..(109)  
 <223> n is a, c, g, or t

<220>  
 <221> misc\_feature  
 <222> (207)..(207)  
 <223> n is a, c, g, or t

<400> 21  
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 gccgcggccc atccgggtgc gcgaccatc gtgcacacag ttcaagcatt atacagaaaa 180  
 atagaagatct ctatgtgtcc gcagcanatg aagatcattt tcgtcttttc tcctcttgct 240  
 attgtctcat gcggccctct gcgcgatttt atgtttttatgt tcataagttt taggcaat 300  
 cagctgcgtt cgcctgtctt gctcagccaa cagggtctta gcccataata tgatgtcgta 360  
 aggccatgcgtt atggccatgc ggcgcggccc ttcttgcattt cagctgcatt tcaactgaga 420  
 aataaccacgg tctggcaaca tcaggctgtt ggcgcacat tcctctatca ggacattaaac 480  
 atgttccagg ccatagcgta cgagctacaa ctcccgacat ttggtgatct ctatcttgat 540

## 591508035Seqlist.txt

cggaatcagg	ctcaagtc	agctcttatt	gctttttaacg	tggcatctag	atatggatc	600
ccaccttagt	actatggtc	accaggacc	attacacc	ttggcggtgt	cttgtatgt	660
gtttaacag	tatagtgtt	cggaatgtta	aaataagctc	agatatcatc	atatgtgaca	720
tgtgaaactt	tgggtat	aaatagaat	aaatggcct	ttccatattt		769

<210> 22  
<211> 149  
<212> PRT  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

<400> 22  
Met Lys Ile Ile Phe Val Phe Ala Leu Leu Ala Ile Ala Ala Cys Arg  
1 5 10 15  
Pro Leu Pro Ser Leu Met Phe Leu Gly Gln Ser Tyr Arg Gln Tyr Gln  
20 25 30  
Leu Gln Ser Pro Val Leu Leu Gln Gln Gln Val Leu Ser Pro Tyr Asn  
35 40 45  
Glu Phe Val Arg Gln Gln Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln  
50 55 60  
Ser Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln His Gln Ala  
65 70 75 80  
Gly Gly Gln Gln Ser Arg Tyr Gln Asp Ile Asn Ile Val Gln Ala Ile  
85 90 95  
Ala Tyr Glu Leu Gln Leu Gln Gln Phe Gly Asp Leu Tyr Phe Asp Arg  
100 105 110  
Asn Gln Ala Gln Ala Gln Ala Leu Leu Ala Phe Asn Val Pro Ser Arg  
115 120 125  
Tyr Gly Ile Tyr Pro Arg Tyr Tyr Gly Ala Pro Ser Thr Ile Thr Thr  
130 135 140  
Leu Gly Gly Val Leu  
145

<210> 23  
<211> 609  
<212> DNA  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

<400> 23  
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60  
gtcttgctc tccttgatc tgctgatgc occacagcgc agtttgatgt tttagtcaa  
120  
aatataggc aatatacggt gcagtcgcct ctccgtac agcaacagggt gcttagctta  
180  
tataatgtc tcgtaaggca gcagatatagc attgcggcaa gcccctttgc gcaatcagct  
240  
gtgttccac tgagaacaca ccaagtttg caacagtc a ggtgggtgc gcaacaatct  
300  
cacttcagg acatataacgt tgccaggccc atagcgcgcg agctacaccc tcacgcgtt  
360  
ggcgtatctt acatggccca gaatctggct caagcgcac gactgttgg tttaacttg  
420  
ccatctacat atggtatcta cccttaggtac tatagagcac cgggtatgt taccacccct  
480  
ggcgtgtct tgtagtgaat ttccacaata tttagttcg gaagtggaaa tataaggctc  
540  
agttatcatc gtatgtgaca tggtaaactt aaggtgatataatggaaat aaaaattatct  
600  
609  
ttccatattt

<210> 24  
<211> 150  
<212> PRT  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

## 591508035Seqlist.txt

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<400> 24
Met Lys Ile Ile Phe Val Phe Ala Leu Leu Ala Ile Ala Ala Cys Ala
1 5 10 15
Thr Ala Gln Phe Asp Val Leu Gly Gln Asn Ile Arg Gln Tyr Gln Val
20 25 30
Gln Ser Pro Leu Leu Leu Gln Gln Gln Val Leu Ser Leu Tyr Asn Glu
35 40 45
Phe Val Arg Gln Gln Tyr Ser Ile Ala Ala Ser Pro Phe Leu Gln Ser
50 55 60
Ala Val Phe Gln Leu Arg Asn Asn Gln Val Leu Gln Gln Leu Arg Leu
65 70 75 80
Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Val Val Gln Ala Ile
85 90 95
Ala Gln Gln Leu His Leu Gln Gln Phe Gly Asp Leu Tyr Ile Asp Arg
100 105 110
Asn Leu Ala Gln Ala Gln Arg Leu Leu Ala Phe Asn Leu Pro Ser Thr
115 120 125
Tyr Gly Ile Tyr Pro Arg Tyr Tyr Arg Ala Pro Gly Ser Ile Thr Thr
130 135 140
Leu Gly Gly Val Leu Tyr
145 150

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<210> 25

211 596

<212> DNA

1220

<220>  
<223> 13kD prolamin

<400> 25

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atatcagctg	tcttcgtcgt	tcgttcgtac	ggcaacatgt	ctttagccat	ataatgggt	180
cgtaaaggcg	cagtatggca	tagccggcaag	cccccttcgt	caatcagctg	cgtttcaact	240
ggaaacaaac	caatgttgc	aaacagtgc	gtctgggtgc	caacaatctc	atatccaggag	300
cattaacatt	gttcaggcca	tagcgcagca	gtctaaactc	cagcagtttg	gtgtatctca	360
cttttgatcg	aatccgttgc	aaacctcaagg	ttctttgtgt	tttaaggatgc	cacccatctg	420
tgttgcattac	ccttagtact	atgttgccacc	cgtatccatt	ggcggtgtct	gggggttttt	480
gtaaatggat	ttaaacatgt	agtggtttgcg	agataaaaaa	taatggctcga	tatcatcata	540
tgttgcattat	qaaatcttgg	qttatataaa	tadaaaaaaa	ttgttttttc	atattt	596

<210> 26

<211> 149

<212> PR

<213> *Oryza sativa*

<220>

225 15RD

<400> 26

Met Lys Ile Ile Phe

Pro Leu G

20	25	30	
Gln Ser Pro Val Leu Leu Gln Gln His Val Leu Ser Pro Tyr Asn Glu			
35	40	45	
Phe Val Arg Gln Gln Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln Ser			
50	55	60	
Ala Ala Phe Gln Leu Arg Asn Asn Gln Val Trp Gln Gln Leu Ala Leu			
65	70	75	80
Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Ile Val Gln Ala Ile			

## 591508035Seqlist.txt

	85	90	95
Ala Gln Gln Leu Gln Leu Gln Gln	Phe	Gly Asp	Leu Tyr Phe Asp Arg
100	105		110
Asn Leu Ala Gln Ala Leu	Leu Ala Phe Asn Val	Pro Ser Arg	
115	120	125	
Tyr Gly Ile Tyr Pro Arg Tyr	Gly Ala Pro Ser Thr Ile Thr Thr		
130	135	140	
Leu Gly Gly Val Leu			
145			

<210> 27  
<211> 285  
<212> DNA  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

<400> 27					
gttcgttaagg caacagttata	gcatacggtgc	aaccggcccttc	tggcaaccag	ctacgtttca	60
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acatttccac taccaggcgc	tttagttatgt	tcaagcgatt	gtgc当地	tacaactgca	180
gcatttttagt gggtgtctact	ttgtatcgac	tcaagctaa	gc当地aaactt	ttttgacctt	240
caactttccc atccatatgt	ggtatctacc	tttaacttact	atttgt		285

<210> 28  
<211> 94  
<212> PRT  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

<400> 28					
Phe Val Arg Gln Gln Tyr Ser Ile Val	Ala Thr Pro Phe Trp Gln Pro				
1	5	10	15		
Ala Thr Phe His Leu Ile Asn Asn Gln	Val Met Gln Gln Gln Phe Cys				
20	25	30			
Gln Gln Leu Arg Leu Val Ala Gln His Ser His Tyr	Gln Ala Ile Ser				
35	40	45			
Ile Val Gln Ala Ile Val Gln Gln Leu Gln Leu Gln His Phe Ser Gly					
50	55	60			
Val Tyr Phe Asp Gln Thr Gln Ala Gln Ala Gln Thr Phe Leu Thr Phe					
65	70	75	80		
Asn Phe Pro Ser Ile Cys Gly Ile Tyr Leu Asn Leu Leu Leu					
85	90				

<210> 29  
<211> 1836  
<212> DNA  
<213> Oryza sativa

<220>  
<223> 13kD prolamin

<400> 29					
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aaacttggaa ctcataatgg	gtgtttatcc	taatgtat	gtatccatca	tcttagaaata	120
taacaatcta gaattatgt	tgctatctaa	acacattgt	tgatgtatgt	tgtcatctaa	180
tcttagatat aatctaaaac	ggaaagggtaa	acggaggag	tacccatata	gtatggcat	240
ttcatatgttgc ttataatgg	ccctgtgcgc	tgatgtatgt	tgatgtatgt	aaaaggatct	300
ttcatatgttgc ttataatgg	gggtgc当地aaat	agaaatcatgc	tccaaatgc	acatgtatgt	360
acgacacact tagattctaa	taggacatcc	aaggaaaca	acatgtatgt	cctaataggaa	420

## 591508035Seqlist.txt

catccaagca	aaactaacac	tcttagagcc	ccggataagga	atgaaaaaaag	tttgcacatc	480
attcttgaca	agaggtagt	tacaaaaaaa	attatggat	gagctctgc	tcactacgca	540
tcacagaat	ataacatgt	tataaaaaat	tcgatata	agccaaaaat	cagcagcAAC	600
aatgggtt	aaaatggaa	agaaggattt	atgtatgtt	tcatgtttat	cagtgcgaaa	660
agatgttta	ctgttaccaa	aatggataat	aaacctgtat	tttcaacaaa	actagaggaa	720
ctctgttaat	tgccagggt	catccctaga	agtgtgttcc	tccttacggg	aggaggaggat	780
atatgtat	gacacaaag	ttatccat	gatgaaacca	aagggttattt	gttggggcac	840
ctaacagaa	atctatctaa	atgacatgac	tcactatgt	ccctaatagg	catccaagca	900
aaactaacac	tctaaaggaa	ccgatgggaa	atgaaagaa	aataatatgccc	atccgcacatc	960
taaatagaca	agccaaatgt	aaaccctct	catgtttac	acagttaag	cattatacag	1020
aaaagaagat	ctgtgtccc	gcagcaatgt	agatcatttt	ccgtctttgc	tctcttgct	1080
attgtgtcat	gcaacaccc	tgccgtatgt	atgttttag	tccaaatgtt	agcaataatc	1140
actacatgc	gcctctctta	caacaacaaac	agggtgtttag	cccatataat	gacttcgtaa	1200
ggcagcgata	tggcatatgc	gcacccccc	tcttgcatac	agctgcgtt	aaactgagaa	1260
ataaccaagt	ctggcaacag	ctcggtctgg	tggcacaaca	atctcaat	caggacattt	1320
acattgttca	ggccatgcgc	cacgcgttat	aactcccgaa	gttgggtat	ctctactttt	1380
atccgaatcc	ggctcaatgc	caagctctgt	tggctttta	cgtgcacatc	agatgttgc	1440
tctaccatgc	atctatgtat	acaccaggta	ccatccat	ccgtggcggt	gtcttgcata	1500
gaggtttaa	agatgtatgg	ttccggaaat	aaaaataaagc	tcataatata	tcataatgtga	1560
catgtgaaat	tttgggtgtaa	ataaaatcga	ataaaatgtt	ctttcatattt	taaataccat	1620
gcctctataa	ggatataatcc	tagatcatgg	tgcataactaa	ttaatccat	cggactctca	1680
caattttact	gtgttcttac	attcgcattc	aaatgtactt	gtttttaaga	tataatgtga	1740
gcgtatataa	gtatgtccgtc	ctttcattcc	aataagaaca	atgttaacatc	ctgaaaatgt	1800
gtcattttct	aatctgtcat	catggcgact	ctttag			1836

<210> 30  
 <211> 101  
 <212> PRT  
 <213> Oryza sativa

<220>  
 <223> 13kD prolamin

<400> 30  
 Met Lys Ile Ile Phe Arg Leu Cys Ser Pro Cys Tyr Cys Cys Met Gln  
 1 5 10 15  
 His Leu Cys Val Val Asp Val Leu Gly Gln Ser Tyr Arg Gln Tyr Gln  
 20 25 30  
 Leu Gln Ser Pro Leu Leu Gln Gln Gln Val Leu Ser Pro Tyr Asn  
 35 40 45  
 Asp Phe Val Arg Gln Arg Tyr Gly Ile Ala Ala Ser Pro Phe Leu Gln  
 50 55 60  
 Ser Ala Ala Phe Lys Leu Arg Asn Asn Gln Val Trp Gln Gln Leu Gly  
 65 70 75 80  
 Leu Val Ala Gln Gln Ser His Tyr Gln Asp Ile Asn Ile Val Gln Ala  
 85 90 95  
 Ile Ala Gln Gln Leu  
 100

<210> 31  
 <211> 622  
 <212> DNA  
 <213> Oryza sativa

<220>  
 <223> 16kD prolamin

<400> 31  
 aacatcaaa acgttataag agttctctag catccatcac atagccatga agatctttgt  
 catctctctt ctccctcgcc tcgcagcgag cagcgcctcg gcacatggt atgcttgac  
 ctatggccaa tgccagcagc agccgtttat gcaaccgatc atgaaatccgt gcaatggat  
 cgtgaggcaa cagtgcagcc cgtatggactt accttggaaat cgttcacccca ggctacaaact  
 gagcagctgc caggatgtgc ggcagcaatg ctgtcagcagc atgagggtga tggcgcaaca

60
120
180
240
300

## 591508035Seqlist.txt

atatcattgc	caggctattt	gcacccatgg	gcagtttata	atgcagcaag	tgcagtttga	360
tgtcgctt	gttggcgagc	cccaagctca	ggcccccaggcc	cagggtggctc	tcaatttgc	420
cttcatgtt	ggagtctacc	cttaggtactg	cggacttcca	tgc当地atgtt	ctactggc	480
ttcggttct	tggtagtgc	taccatata	tatataatgt	tgc当地atataa	aagtgtcaca	540
catcatctgt	tgtgtcatgt	aataaaaattt	gaaatagttt	ttggctgttc	gtatgataaa	600
atgaaaatta	taacaaaaaa	aa				622

<210> 32  
<211> 149  
<212> PRT  
<213> Oryza sativa

<220>  
<223> 16kD prolamin

<400> 32  
Met Lys Ile Phe Val Ile Leu Ser Leu Leu Ala Leu Ala Ala Ser Ser  
1 5 10 15  
Ala Ser Ala Gln Phe Asp Ala Cys Thr Tyr Gly Gln Cys Gln Gln Gln  
20 25 30  
Pro Phe Met Gln Pro Ile Met Asn Pro Cys Asn Glu Phe Val Arg Gln  
35 40 45  
Gln Cys Ser Pro Met Ser Leu Pro Trp Lys Gln Ser Arg Arg Leu Gln  
50 55 60  
Leu Ser Ser Cys Gln Val Met Arg Gln Gln Cys Cys Gln Gln Met Arg  
65 70 75 80  
Leu Met Ala Gln Gln Tyr His Cys Gln Ala Ile Cys Thr Met Val Gln  
85 90 95  
Ser Ile Met Gln Gln Val Gln Phe Asp Ala Gly Phe Val Gly Glu Pro  
100 105 110  
Gln Ala Gln Ala Gln Ala Gln Val Ala Leu Asn Leu Pro Ser Met Cys  
115 120 125  
Gly Val Tyr Pro Arg Tyr Cys Ser Thr Pro Cys Lys Val Ala Thr Gly  
130 135 140  
His Cys Gly Ser Trp  
145

<210> 33  
<211> 562  
<212> DNA  
<213> Oryza sativa

<220>  
<223> 10kD prolamin

<400> 33  
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60  
acacccggcaaa gatcttttgcct ctgtttgcct taatgtctt ttctgcatagt gcccactactg  
120  
caatcaccac tatgtcgatgtt ttcccccacca cattagccat gggcaccatgt gatccgtgt  
180  
ggcagttatc gatgtccaaacgg ttggggcatgg gttagcttcca agccatgtttc atgtcgcc  
240  
caatgtcgctt cttcgccggc caatgtgtca tgc当地atgttca aggtatgtatgtt cttccatgt  
300  
actgtggccat cagttggccatc atgtgtccaa gcatgtccaa agttatgttgcgtggacttc  
360  
ggcagccggca gatgtatggatggccatgtc agatgtccata catgtccaaatc atggccccc  
420  
tcaacttcca actcttttcc ttgtgtgttt gtgtatcaaa cttgtgttac atgtacttca  
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540  
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562

<210> 34  
<211> 134  
<212> PRT  
<213> Oryza sativa

<220>

## 591508035Seqlist.txt

&lt;223&gt; 10kD prolamin

&lt;400&gt; 34

Met Ala Ala Tyr Thr Ser Lys Ile Phe Ala Leu Phe Ala Leu Ile Ala  
 1 5 10 15  
 Leu Ser Ala Ser Ala Thr Thr Ala Ile Thr Thr Met Gln Tyr Phe Pro  
 20 25 30  
 Pro Thr Leu Ala Met Gly Thr Met Asp Pro Cys Arg Gln Tyr Met Met  
 35 40 45  
 Gln Thr Leu Gly Met Gly Ser Ser Thr Ala Met Phe Met Ser Gln Pro  
 50 55 60  
 Met Ala Leu Leu Gln Gln Cys Cys Met Gln Leu Gln Gly Met Met  
 65 70 75 80  
 Pro Gln Cys His Cys Gly Thr Ser Cys Gln Met Met Gln Ser Met Gln  
 85 90 95  
 Gln Val Ile Cys Ala Gly Leu Gly Gln Gln Gln Met Met Lys Met Ala  
 100 105 110  
 Met Gln Met Pro Tyr Met Cys Asn Met Ala Pro Val Asn Phe Gln Leu  
 115 120 125  
 Ser Ser Cys Gly Cys Cys  
 130

&lt;210&gt; 35

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Oryza rufipogon

&lt;220&gt;

&lt;223&gt; 10kD prolamin

&lt;400&gt; 35

aattgcttt tctgcaagtgc ccaactactgc aatcaccact atgcagtatt tcccaccaac 60  
 attagccatg ggccatcgatgg atccgtgttag gcagttatgc atgcacacgt tggcatggg  
 tagtccaca gccatgttca tggcgcgc aatggcgctc ctgcagcgc aatgttgcat 120  
 gcagctacaa ggcatgtgc ctcaatgcgc ctggcgcacc agttgcaga tgatgcagag  
 catgcacaa gttatgttg ctggactcgg gcagcgcgc atgatgaga tggcgatgca 180  
 gatgcatac atgtcaaca tggccctgt ca 240  
 300  
 332

&lt;210&gt; 36

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Oryza rufipogon

&lt;220&gt;

&lt;223&gt; 10kD prolamin

&lt;400&gt; 36

Ile Ala Leu Ser Ala Ser Ala Thr Thr Ala Ile Thr Thr Met Gln Tyr  
 1 5 10 15  
 Phe Pro Pro Thr Leu Ala Met Gly Thr Met Asp Pro Cys Arg Gln Tyr  
 20 25 30  
 Met Met Gln Thr Leu Gly Met Gly Ser Ser Thr Ala Met Phe Met Ser  
 35 40 45  
 Gln Pro Met Ala Leu Leu Gln Gln Cys Cys Met Gln Leu Gln Gly  
 50 55 60  
 Met Met Pro Gln Cys His Cys Gly Thr Ser Cys Gln Met Met Gln Ser  
 65 70 75 80  
 Met Gln Gln Val Ile Cys Ala Gly Leu Gly Gln Gln Gln Met Met Lys  
 85 90 95  
 Met Ala Met Gln Met Pro Tyr Met Cys Asn Met Ala Pro Val  
 100 105 110

&lt;210&gt; 37

## 591508035Seqlist.txt

<211> 349  
 <212> DNA  
 <213> Oryza longistaminata

<220>  
 <223> 10kD prolamin

<220>  
 <221> misc\_feature  
 <222> (18)..(19)  
 <223> n is a, c, g, or t

<400> 37

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agtatttccc	accaacatta	gccatgggca	ccatggatcc	gtgttaggcag	tacatgatgc	120
aaacgttggg	cattggtagc	tccacaacca	tgttcatgtc	gcacccaatg	gcgtccctgc	180
agcagcaatg	tttgcatgcag	cttacaaggcg	tgtatgcctca	gtgccactgt	ggcaccagt	240
gcacatgtat	gcacagatgc	caacaaggcg	tgtgtgcctgg	actggggcag	caggcagatga	300
tgtatgcatgt	ggcaatgcag	atggccataca	tgttgcacat	ggcccccgt		349

<210> 38

<211> 116

<212> PRT

<213> Oryza longistaminata

<220>  
 <223> 10kD prolamin

<220>  
 <221> misc\_feature

<222> (6)..(6)

<223> Xaa can be any naturally occurring amino acid

<400> 38

Leu	Phe	Ala	Leu	Ile	Xaa	Leu	Leu	Ser	Ala	Ser	Ala	Thr	Thr	Ala	Ile
1				5				10				15			
Thr	Thr	Met	Gln	Tyr	Phe	Pro	Pro	Thr	Leu	Ala	Met	Gly	Thr	Met	Asp
					20			25				30			
Pro	Cys	Arg	Gln	Tyr	Met	Met	Gln	Thr	Leu	Gly	Met	Gly	Ser	Ser	Thr
					35			40				45			
Thr	Met	Phe	Met	Ser	Gln	Pro	Met	Ala	Leu	Gln	Gln	Gln	Cys	Cys	
					50			55				60			
Met	Gln	Leu	Gln	Gly	Met	Met	Pro	Gln	Cys	His	Cys	Gly	Thr	Ser	Cys
65					70			75				80			
Gln	Met	Met	Gln	Ser	Met	Gln	Gln	Val	Val	Cys	Ala	Gly	Leu	Gln	
					85			90				95			
Gln	Gln	Met	Met	Lys	Met	Ala	Met	Gln	Met	Pro	Tyr	Met	Cys	Asn	
					100			105				110			
Met	Ala	Pro	Val												
			115												

<210> 39

<211> 343

<212> DNA

<213> Oryza rufipogon

<220>  
 <223> 10kD prolamin

<400> 39

ctgtttgcct	taattgctct	ttctgcaagt	gccactactg	caatcaccc	tatgcagtat	60
ttcccacaa	cattagccat	gggcacccat	gatccgtgt	ggcagttatc	gatgcacacg	120
ttgggcatgg	gtatctccac	agccatgttc	atgtcgcacg	caatggcgct	cctgcagcag	180

## 591508035Seqlist.txt

caatgttgc	tgcagctaca	aggcatgatg	cctcagtgcc	actgtggcac	cagttccag	240
atgtgcaga	gcatgcaca	aggattttgt	gctggactcg	ggcagcagca	gatgtgaag	300
atggcgtatc	agatgccata	catgtcaac	atggccctg	tca	343	

<210> 40  
<211> 113  
<212> PRT  
<213> Oryza rufipogon

<220>  
<223> 10kd prolamin

<400> 40  
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1 5 10 15  
Thr Met Gln Tyr Phe Pro Pro Thr Leu Ala Met Gly Thr Met Asp Pro  
20 25 30  
Cys Arg Gln Tyr Met Met Gln Thr Leu Gly Met Gly Ser Ser Thr Ala  
35 40 45  
Met Phe Met Ser Gln Pro Met Ala Leu Leu Gln Gln Gln Cys Cys Met  
50 55 60  
Gln Leu Gln Gly Met Met Pro Gln Cys His Cys Gly Thr Ser Cys Gln  
65 70 75 80  
Met Met Gln Ser Met Gln Gln Val Ile Cys Ala Gly Leu Gly Gln Gln  
85 90 95  
Gln Met Met Lys Met Ala Met Gln Met Pro Tyr Met Cys Asn Met Ala  
100 105 110  
Pro

<210> 41  
<211> 339  
<212> DNA  
<213> Oryza rufipogon

<220>  
<223> 10kd prolamin

<400> 41  
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300  
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<210> 42  
<211> 113  
<212> PRT  
<213> Oryza rufipogon

<220>  
<223> 10kd prolamin

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1 5 10 15  
Met Gln Tyr Phe Pro Pro Thr Leu Ala Met Gly Thr Met Asp Pro Cys  
20 25 30  
Arg Gln Tyr Met Met Gln Thr Leu Gly Met Gly Ser Ser Thr Ala Met  
35 40 45  
Phe Met Ser Gln Pro Met Ala Leu Leu Gln Gln Cys Cys Met Gln  
50 55 60  
Leu Gln Gly Met Met Pro Gln Cys His Cys Gly Thr Ser Cys Gln Met

591508035Seqlist.txt

65	70	75	80
Met Gln Ser Met Gln Gln Val Ile Cys Ala Gly Leu Gly Gln Gln Gln			
85	90	95	
Met Met Lys Met Ala Met Gln Met Pro Tyr Met Cys Asn Met Ala Pro			
100	105	110	

Val

<210> 43  
<211> 343  
<212> DNA  
<213> Oryza rufipogon

<220>  
<221> misc\_feature  
<222> (19)..(19)  
<223> n is a, c, g, or t

<400> 43  
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cgttgggcat ggtagctcc acagccatgt tcataatgtcgc gccaatggcg ctccatgcac 180  
acaaatgttgc catgcagctt caaggcatgtg tgccatgtgc ccactgtggc accagttgcc 240  
agatgtatgtca gaggatgtca caagtttattt gtgtgtggact cgggcagcag cagatgtatgtca 300  
agatggcgtat gcagatgtcca tacatgtgca acatgtggccc tgt 343

<210> 44  
<211> 114  
<212> PRT  
<213> Oryza rufipogon

<220>  
<221> misc\_feature  
<222> (6)..(6)  
<223> Xaa can be any naturally occurring amino acid

<400> 44  
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Cys Arg Gln Tyr Met Met Gln Thr Leu Gly Met Gly Ser Ser Thr Ala  
35 40 45  
Met Phe Met Ser Gln Pro Met Ala Leu Leu Gln Gln Gln Cys Cys Met  
50 55 60  
Gln Leu Gln Gly Met Met Pro Gln Cys His Cys Gly Thr Ser Cys Gln  
65 70 75 80  
Met Met Gln Ser Met Gln Gln Val Ile Cys Ala Gly Leu Gly Gln Gln  
85 90 95  
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100 105 110  
Pro Val

<210> 45  
<211> 533  
<212> DNA  
<213> Oryza sativa

## 591508035Seqlist.txt

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<223> 10kD prolam

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<210> 46  
<211> 134  
<212> PRT  
<213> *Oryza sativa*

<220>  
<223> 10kD prolam

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Pro Thr Leu Ala Met Gly Thr Met Asp Pro Cys Arg Gln Tyr Met Met
35          40          45
Gln Thr Leu Gly Met Gly Ser Ser Thr Ala Met Phe Met Ser Gln Pro
50          55          60
Met Ala Leu Leu Leu Gln Gln Cys Cys Met Gln Leu Gln Gly Met Met
65          70          75          80
Pro Gln Cys His Cys Gly Thr Ser Cys Gln Met Met Gln Ser Met Gln
85          90          95
Gln Val Ile Cys Ala Gly Leu Gly Gln Gln Met Met Lys Met Ala
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Met Gln Met Pro Tyr Met Cys Asn Met Ala Pro Val Asn Phe Gln Leu
115         120         125
Ser Ser Cys Gly Cys Cys
130

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<210> 47  
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<212> DNA  
<213> *Oryza sativa*

<220>  
<223> 10kDa prolamin promoter

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	taattataat	atcagttaa	attggaaaaa	atgcacatc	atacttgcat	gtgtgcgtg	180
	gtgcctgc	agaatgtg	tttgtcata	atgatattac	atgaaatgt	tttacttct	240
	tcgttctct	tttttgtaa	gataaagaac	tagatgtg	gaaatgttg	tagcaagag	300
	atggcccaa	ctctaaatcc	tgcttttttt	ttttggatgg	acccaaaatt	tgttttctct	360
	ttactcttt	cccctttcaa	caatgttctt	tatccccaat	tcttataaa	aaactccaa	420
	atacatgcca	aactgcata	gtatgtatgc	tattaaggca	catttacaa	gtcccaagt	480
	tcacttgc	atccatcaca	ttatggcgatg	actcaactc	ttaatgttta	tctgtgtta	540
	tcgtacttg	tttacacat	tcttacaaatc	ccatcatgt	tctgttcaca	aaatgttgc	600
	tgcccaatgc	ataatttaca	aaactgcataa	atgcacaaatc	aatctggcata	acccatgttca	660
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## 591508035Seqlist.txt

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tgataataa	ggcccttagg	caaccattt	tccatcatcc	tcaacaatat	tgtctacacc	900
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<211> 1351  
<212> DNA  
<213> Oryza sativa

<220>  
<223> GLUTELIN-B1 promoter

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taaatggaaa	aaaaaaaagg	aaaaaggggaa	tggttctgc	ttttttggct	gaaggccgg	180
tgtggccagc	gtgtgcgtg	cgacacgcga	gcaacacac	gacggagcag	ctacgacgaa	240
cggggggaccg	agtgtggaccgg	acgaggatgt	ggcccttaggg	gagttgcacaa	ggctgtgtga	300
ctcgggtcccc	gcgcgggtatc	ccggagtggtc	cactgtctgc	aaacacgatt	cacatagac	360
gggcagacgc	ggggacccgtc	ctagggtcaca	cgaaaggcaaa	tcgcgtcgct	gggtggattt	420
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<210> 49  
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<212> DNA  
<213> Unknown

<220>  
<223> CaMV 35S gene promoter

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## 591508035Seqlist.txt

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<213>	Artificial Sequence					
<220> recombinant construct						
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cggcccaagct	gcatacgtca	aattggccgtc	aaccaaagctt	tgatagagtt	ggtaaagacc	240
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## 591508035Seqlist.txt

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<213> Unknown

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<223> hygromycin phosphotransferase gene

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<212> DNA  
<213> Unknown

<220>  
<223> Nos terminator

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gggtatcatctt atgttactatgcgatcc 265

<210> 56  
<211> 341  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> recombinant construct HPT

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Glu Ser Arg Ala Phe Ser Phe Asp Val Gly Gly Arg Gly Tyr Val Leu  
35 40 45  
Arg Val Asn Ser Cys Ala Asp Gly Phe Tyr Lys Asp Arg Tyr Val Tyr  
50 55 60  
Arg His Phe Ala Ser Ala Ala Leu Pro Ile Pro Glu Val Leu Asp Ile  
65 70 75 80  
Gly Glu Phe Ser Glu Ser Leu Thr Tyr Cys Ile Ser Arg Arg Ala Gln  
85 90 95

Gly Val Thr Leu Gln Asp Leu Pro Glu Thr Glu Leu Pro Ala Val Le  
 100 105 110  
 Gln Pro Val Ala Glu Val Met Asp Ala Ile Ala Ala Ala Asp Leu Se  
 115 120 125  
 Gln Thr Ser Gly Phe Gly Pro Phe Gly Pro Gln Gly Ile Gly Gln Ty  
 130 135 140  
 Thr Thr Trp Arg Asp Phe Ile Cys Ala Ile Ala Asp Pro His Val Ty  
 145 150 155 160  
 His Trp Gln Thr Val Met Asp Asp Thr Val Ser Ala Ser Val Ala Gl  
 165 170 175  
 Ala Leu Asp Glu Leu Met Leu Trp Ala Glu Asp Cys Pro Glu Val Ar  
 180 185 190  
 His Leu Val His Ala Asp Phe Gly Ser Asn Asn Val Leu Thr Asp As  
 195 200 205  
 Gly Arg Ile Thr Ala Val Ile Asp Trp Ser Glu Ala Met Phe Gly As  
 210 215 220  
 Ser Gln Tyr Glu Val Ala Asn Ile Phe Phe Trp Arg Pro Trp Leu Al  
 225 230 235 240  
 Cys Met Glu Gln Gln Thr Arg Tyr Phe Glu Arg Arg His Pro Glu Le  
 245 250 255  
 Ala Gly Ser Pro Arg Leu Arg Ala Tyr Met Leu Arg Ile Gly Leu As  
 260 265 270  
 Gln Leu Tyr Gln Ser Leu Val Asp Gly Asn Phe Asp Asp Ala Ala Tr  
 275 280 285  
 Ala Gln Gly Arg Cys Asp Ala Ile Val Arg Ser Gly Ala Gly Thr Va  
 290 295 300  
 Gly Arg Thr Gln Ile Ala Arg Arg Ser Ala Ala Val Trp Thr Asp Gl  
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<210> 57  
<211> 2158  
<212> DNA  
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<220>  
<223> recombinant construct CAMV35S-Modified HPT-NOS

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## 591508035Seqlist.txt

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## 591508035Seqlist.txt

## 591508035Seqlist.txt

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## 591508035Seqlist.txt

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 Leu Gln Ser Pro Val Leu Leu Gln Gln Val Leu Ser Pro Tyr Asn  
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 65 70 75 80  
 His Tyr Gln Asp Ile Asn Ile Val Gln Ala Ile Ala Gln Gln Leu Gln  
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 35 40 45  
 Glu Phe Val Arg Gln Gln His Ser Ile Val Ala Thr Pro Phe Trp Gln  
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 Pro Ala Thr Phe Gln Leu Ile Asn Asn Gln Val Met Gln Gln Gln Cys  
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 Cys Gln Gln Leu Arg Leu Val Ala Gln Gln Ser His Tyr Gln Ala Ile  
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## 591508035Seqlist.txt

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 35 40 45  
 Glu Phe Val Arg Gln Gln Tyr Ser Ile Val Ala Thr Pro Phe Trp Gln  
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 Pro Ala Thr Phe Gln Leu Ile Asn Asn Gln Val Met Gln Gln Gln Arg  
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 85 90 95  
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 Phe Ser Gly Val Tyr Phe Asp Gln Thr Gln Ala Gln Ala Gln Thr Leu  
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 Pro Thr Leu Ala Met Gly Thr Met Asp Pro Cys Arg Gln Tyr Met Met  
 35 40 45  
 Gln Thr Leu Gly Met Gly Ser Ser Thr Ala Met Phe Met Ser Gln Pro  
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 65 70 75 80  
 Pro Gln Cys His Cys Gly Thr Ser Cys Gln Met Met Gln Ser Met Gln  
 85 90 95  
 Gln Val Ile Cys Ala Gly Leu Gly Gln Gln Gln Met Met Lys Met Ala  
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 <212> PRT  
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 Pro Phe Met Gln Pro Ile Met Asn Pro Cys Asn Glu Phe Val Arg Gln  
 35 40 45  
 Gln Cys Ser Pro Met Ser Leu Pro Trp Lys Gln Ser Arg Arg Leu Gln  
 50 55 60  
 Leu Ser Ser Cys Gln Val Met Arg Gln Gln Cys Cys Gln Gln Met Arg  
 65 70 75 80  
 Leu Met Ala Gln Gln Tyr His Cys Gln Ala Ile Cys Thr Met Val Gln  
 85 90 95  
 Ser Ile Met Gln Gln Val Gln Phe Asp Ala Gly Phe Val Gly Glu Pro  
 100 105 110  
 Gln Ala Gln Ala Gln Val Ala Leu Asn Leu Pro Ser Met Cys  
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 cattaacatt gttcaggcca tagccgcacg gctcaactc cagcagttt gtgtatctta 360  
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48

car nnn cay tay car gcn atg nnn nnn gtn car gcn atg gtn car car  
Gln Xaa His Tyr Gln Ala Met Xaa Xaa Val Gln Ala Met Val Gln Gln  
20 25 30

96

nnn car nnn car car  
Xaa Gln Xaa Gln Gln  
35

111

<210> 103  
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591508035Seqlist.txt

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591508035Seqlist.txt

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Met Lys Met Met Phe Val Phe Ala Xaa Xaa Ala Met Val Ala Cys Asn	
1 5 10 15	
gcn nnn gcn nnn tty gay gcn nnn nnn car nnn tay nnn car tay car	96
Ala Xaa Ala Xaa Phe Asp Ala Xaa Xaa Gln Xaa Tyr Xaa Gln Tyr Gln	
20 25 30	
nnn car	102
Xaa Gln	
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ttttatattca		ttttttttttt	gaaatctgaca	tgtgggttccc	atgagaattt	ttattttttcg	180
gatcgaaattt		ccacgtaa	gtcactgtca	tgtctatccaa	gatgaaagacc	gagtcaattt	240
ggccacgtaa		ggccgcgtc	ggccaaaaacc	accatccaa	ccggccgggg	acccatctgt	300
cactgtttttt		gatagttgtgg	ggccacccgtt	tatctgtttt	ttcgatgtaa	ggacacaaat	360
caaaatgtttt		gaaactgttgg	ggggcccttaa	ttttttttttt	ttccatccat	aatatttcgt	420
gagccatata		tccgtgggtt	tccaaatctc	ttttttttttt	aggccctttt	aaaaattagat	480
aattggcttc		tttttcgttcac	ccataaaaatgt	ttttttttttt	taccaaaacag	caacatgcgc	540
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<220>  
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ctt tct gca agt gcc act act gca 72  
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## 591508035Seqlist.txt

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gct tct gca cgg ttt gat 48  
Ala Ser Ala Arg Phe Asp  
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Ala Ser Ala Arg Phe Asp  
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1 5 10 15  
gcc tcg gca 48  
Ala Ser Ala  
57

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Ala Ser Ala

<210> 114  
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cta tta tgc cat ggt tct atg gcc  
72

## 591508035Seqlist.txt

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Leu Leu Cys His Gly Ser Met Ala  
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1 5 10 15 48

gtt gcc atc tcc ggc gcg  
Val Ala Ile Ser Gly Ala  
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Val Ala Ile Ser Gly Ala  
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gcccactactg catctagac aatggtgagc aaggggcagg ag 60  
Page 42 102

591508035Seqlist.txt